



International
Road Dynamics Inc.

Slow Speed WIM System For Freight Terminals

IRD is a transportation products and systems company which utilizes advanced technology to design, manufacture and market advanced high technology, integrated traffic management and monitoring systems, as well as automated weight enforcement systems.

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OVERVIEW

IRD's Slow Speed Weigh-In-Motion (SSWIM) System is a high accuracy low speed weighing approach ideally suited for commercial fleet axle weight monitoring, and axle compliance. At the heart of the system is the IRD Model 4020 Slow Speed WIM Scale.

The Model 4020 Scale can accurately weigh vehicles at speeds between 0 and 12 mph (0 and 20 km/h). Its low operation cost, ease of installation and high accuracy make it the ideal choice for checking truck weights, including axle compliance and bridge formula compliance.

DESCRIPTION

The Model 4020 Scale utilizes two shear beam load cells for weight measurement. Since each scale is approximately 10 ft. x 2 ft. (3 m x 0.610 m), only one scale would be required per lane. Each scale is mounted flush with the road surface with a depth of no more than 7 inches (175 mm). The Model 4020 Scale is completely waterproof and functions in all weather and operating conditions.

APPLICATION

Often trucks leaving a freight terminal are unaware of the accurate weight of the load or weight distribution of the load carried by their truck. Checking the weights and weight distribution of a truck before it leaves the terminal ensure that the vehicle complies with weight and dimension regulations.



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LOW LIFE CYCLE COST

The Model 4020 Scale provides a low cost alternative to traditional static weigh scales. Being designed as a Weigh-In-Motion (WIM) Scale, the Model 4020 Scale provides axle weighing capabilities at a fraction of the cost of a Traditional Static Scale. As a result, maintenance costs are low and life cycle costs are attractive. An IRD Model 4020 Scale System can typically be installed and maintained for less than the regular maintenance of a traditional static scale.

SYSTEM OPERATION

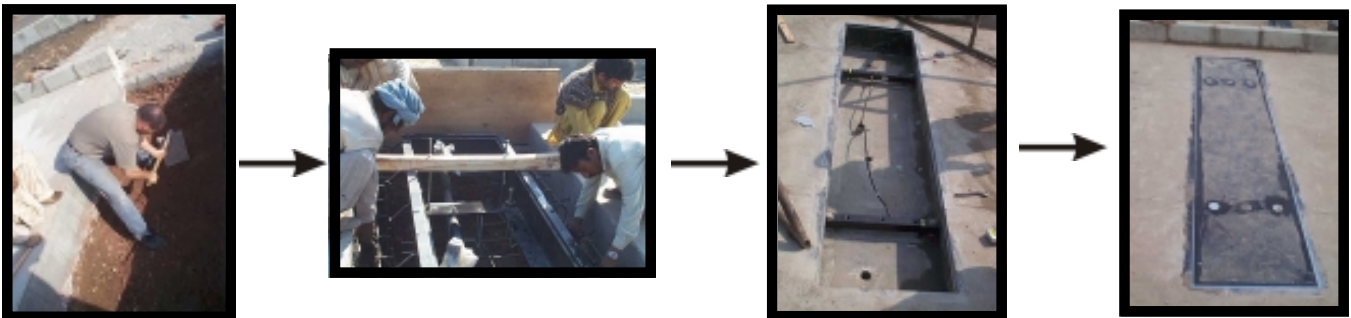
The SSWIM System incorporates the Model 4020 WIM Scale, in road sensors, a processor unit, a driver display and a printer. The system operates in both slow speed WIM and static scale modes. In the WIM mode, the operator directs the truck to the scale where it rolls over the scale at a low speed. In static mode, the truck must stop with each set of axles on the scale. The individual axle weights are calculated and displayed on the screen. When the weighing operation is complete, the system will perform weight compliance checks. The user then has the option of printing a ticket for weight verification. This data is stored in a database should further analysis be desired.

ACCURACY

The Model 4020 Scale exceeds the ASTM E 1318-94 Type IV specification for accuracy. In summary, the ASTM E 1318-94 Type IV specification requires that the WIM system weighs vehicles operating at speeds from 0-10 mph (0-16 km/h) with an accuracy of:

- >5,000 lbs (2,300 kg) +/- 250 lbs (100 kg);
- >12,000 lbs (5,400 kg) +/- 500 lbs (200 kg);
- >25,000 lbs (11,300 kg) +/- 1,200 lbs (500 kg); and
- >60,000 lbs (27,200 kg) +/- 2,500 lbs (1,100 kg).

The IRD Model 4020 Scale increases in accuracy with a decrease in speed. When in a static scale mode it will measure the GVW with an accuracy of +/-0.5%. When used as a dynamic scale it provides accuracies between +/- 1 and 2 % when measuring GVW.



Technical specifications subject to change without notice.

Corporate Offices